

TWO ADDITIONAL NEW SPECIES OF APHELANDRA (ACANTHACEAE)

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1. APHELANDRA GUERRERENSIS Wasshausen, sp. nov.

Suffrutex; caules glabri vel parce strigosi; lamina foliorum oblongo-lanceolate, acuminate, basi angustata, in petiolum decurrens, supra glabra, subtus glabra vel strigillosa; spicae solitariae, terminales, rachidibus dense pilosis; bracteae imbricatae, lanceolatae, pilosae, integrae preter minute et parce serratae; bracteolae lineari-lanceolatae, aristatae, glanduloso-pilosae; calycis segmenta subaequalia, lanceolata, striato-nervata, glanduloso-pilosa; corolla cocinea, glanduloso-pilosa, labiis subaequalibus, labio superior erecto, integro, oblongo-ovato, labio inferiore 3-lobato, lobis subaequalibus.

Shrub or suffrutescent shrub to 2 m high; stems glabrous or sparingly and inconspicuously strigose toward tip; leaf blades oblong-lanceolate, 12-18 cm long, 4-5 cm wide, acuminate, narrowed at base and long-attenuate on the slender petiole, entire, the upper surface drying dark green, glabrous to glabrate, the costa and lateral veins (usually 8-10 pairs) less prominent above than on the lower surface, this drying light green or olive, glabrate to strigillose, the hairs evenly distributed or confined chiefly to the costa and the lateral veins, petioles (unwinged portion) 3-5 cm long, the pubescence similar to that of the stem; spikes terminal, solitary, 6-11 cm long and 2-3 cm broad (without corollas), the rachis densely pilose; bracts closely imbricate or spreading with age, lanceolate, 20-25 mm long, 7.5 mm wide, green, 3-nerved, veined, conspicuously pilose, the margins entire except for a pair of small and inconspicuous teeth above the middle, these 1-2 mm long; bractlets linear-lanceolate, aristate, 12 mm long, 1.5 mm wide, glandular-pilose; calyx segments subequal, lanceolate, aristate 11-12 mm long, 1.5-2 mm wide near the base, striate-nerved, glandular-pilose; corolla red, about 6 cm long, glandular-pilose, the tube slightly oblique, 3.5 cm long, 1 mm wide at base, thence gradually enlarged to 5 mm at throat, the upper lip erect, oblong-ovate, cymbiform, arched at the tip, 2.2 cm long, 8.5 mm wide, entire, the tip acute, the middle lobe of the lower lip oblanceolate, about 2.5 cm long, 7 mm wide, the lateral lobes narrowly deflexed, obliquely lanceolate, 8 mm long, 1.8 mm wide; stamens exerted about 2 cm beyond mouth of the corolla tube; the filaments glabrous; the anthers 4 mm long, glabrous; pollen grains typical, prolate, 39-42 μ long, 28-29 μ wide; the ovary glabrous, 3 mm long; mature capsule not seen.

Type. G. Hinton 11199 (holotype US, isotypes K, NY, UC,

W), Mexico, Guerrero: Galeana, San Andres, 600 m alt, 1 Jun 1938.

Distribution. Known only from the type locality.

Aphelandra guerrensis superficially resembles A. gigantiflora. In A. gigantiflora though, the spikes are 12-30 cm long, the bracts entire, broadly ovate, 10-12 mm wide, the middle lobe of the lower lip obovate, 15-17 mm wide, and the lateral segments of the lower lip oblong, 15 mm long, 5 mm wide.

2. APHELANDRA FLAMMEA Wasshausen, sp. nov.

Suffrutex; caules glabri vel parce pilosi; lamina foliorum elliptica vel obovata, acuminata, basi angustata, in petiolum decurrens, parce puberula; spicae plures, oppositae, pedunculis et rachidibus puberulis; bracteae imbricatae, ellipticae, acuminatae, glabrae, marginibus serratae; bracteolae lanceolatae, puberulae; calycis segmenta subaequalia, striato-nervata, puberula; corolla aurantiaca-coccinea, parce puberula, lobiis subaequalibus, labio superior erecto, integro, oblongo-elliptico, labio inferior 3-lobato, lobiis oblongo-ellipticis, subaequalibus, acuminatis.

Herbaceous to suffrutescent perennial; stems erect, to 5 m high, glabrous to sparingly pilose, the internodes 2-9 cm long; leaf blades elliptic to obovate, 15-24 cm long and 6.2-12.3 cm wide, acuminate, cuneate or gradually narrowed at base and more or less decurrent on the petiole, chartaceous, minutely and inconspicuously puberulous on both surfaces, the margins entire, the costa broad, lateral veins (10-12 pairs) inconspicuous, arcuate, the upper surface nitid often a brilliant polished green, the lower surface pale green, the reticulation obscure; petioles 2-13 cm long, glabrous; flowers borne in simple terminal spikes 11-18 cm long and 1.5-2 cm wide (excluding the corollas), the rachis puberulous, the nodes flattened and slightly excavate; bracts imbricate, elliptic, 17-20 mm long and 7-10 mm wide, acuminate, veiny, glabrous, the margins serrate, the teeth to 1 mm long; bractlets narrowly lanceolate, 4 mm long, minutely and inconspicuously puberulous; calyx 11-12 mm long, the posterior segment lance-subulate, 3 mm wide, the lateral and anterior pairs linear-lanceolate, 1.5 mm wide, the 5 segments and bractlets striate-nerved and puberulous, the nerves ending at the base of each segment in a callus about 1 mm long; corollas 4.5-5.5 cm long, orange-red, sparingly puberulous, the upper lip oblong-elliptic, 17 mm long and 5 mm wide, acute to obtusish and entire, the lower lip spreading, the lobes oblong-elliptic, the middle one 1.5 cm long and 1.8 cm wide, acuminate, the lateral ones similar but narrower, 3 mm wide; pollen grains atypical, prolate spheroidal, about 56 μ in diameter; mature capsule not seen.

Type. Y. Mexia 6700 (holotype US, isotype UC), Ecuador, Cotopaxi: Hacienda Solento, near Santa Rosa, Canton Pajilé, 1,000 m alt, 17-20 Nov 1934.

Distribution. Known only from the type locality.

Aphelandra flammea is perhaps nearest in relationship to

A. sulphurea, but differs markedly in that its petioles are short, 1.2-2 cm long, the bracts 30-32 mm long, acute, denticulate and covered with small inconspicuous subsessile glands, the corolla yellow, the upper corolla lip about 10 mm wide, the middle lobe of the lower corolla lip 2 cm long and 1 cm wide, apically obtuse, and the lateral lobes 6 mm wide.

The pollen of A. flammea is somewhat unique, it is not of the "Spaltenpollen" type usually found in Aphelandra but rather that of the type described by Lindau (Bull. Herb. Boiss. Ser. 2, 4: 322. 1904) for the genus Encephalosphaera. The pollen grains here are prolate spheroidal, about 56 μ in diameter, verrucose, the sexine serpentine-cerebriform, and the furrows converging in a manner suggesting that the surface of each grain is divided into 6 tetragonal sectors. This type of pollen grain was only observed in one other species of Aphelandra, namely A. variegata Morel, a native of Brazil.

The accompanying photographs were made with the scanning electron microscope (Cambridge Stereoscan Mark 2A), at magnifications between X 1,250 and 2,000.

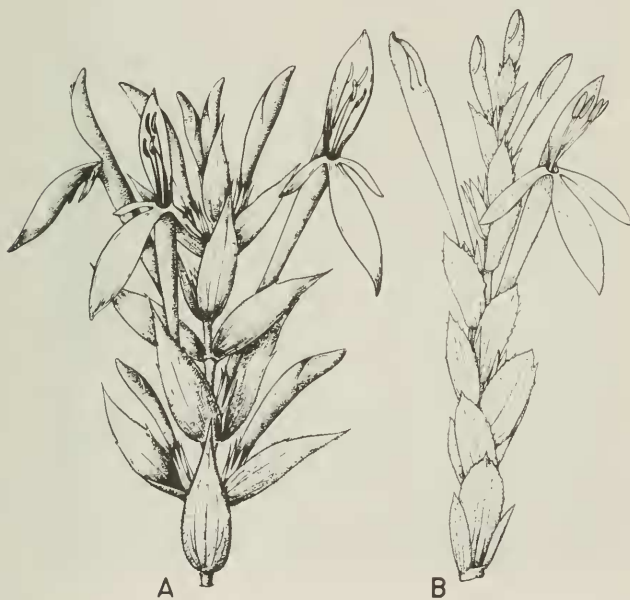


Fig. 1. Species of Aphelandra. A. A. guerrerensis (Hinton 11199): A, inflorescence, x 1; B. A. flammea (Mexico 6700): A, inflorescence, x 1.

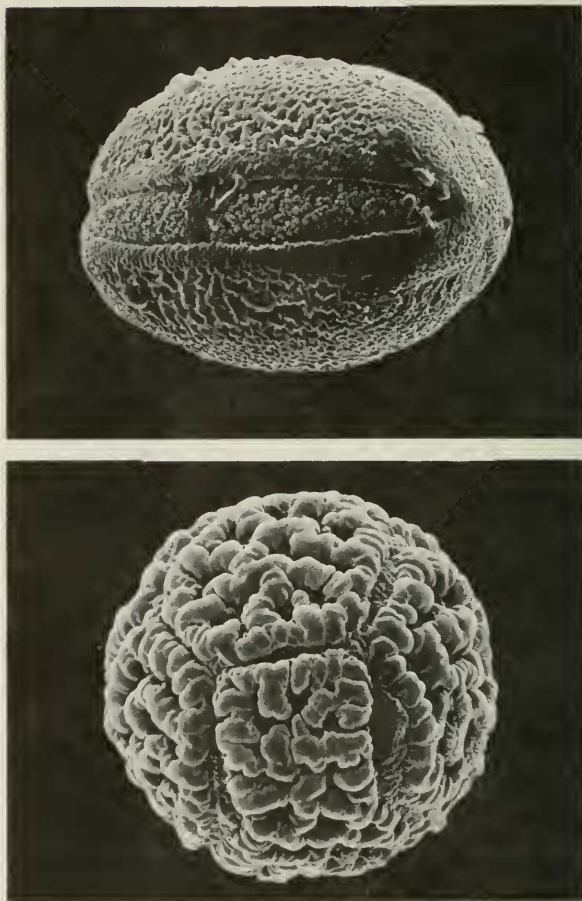


Fig. 2. Pollen grains of Aphelandra. Above, A. guerrerensis (Hinton 11199); equatorial view, x 2000; below, A. flammea (Mexia 6700); equatorial view, x 1250.